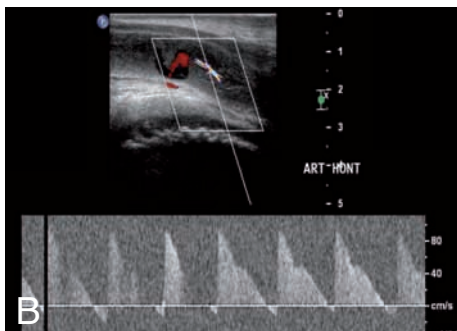
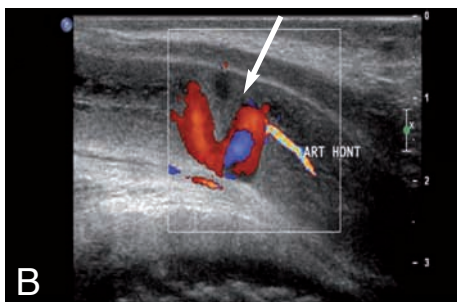


IMAGES IN CLINICAL RADIOLOGY



Posttraumatic priapism in child

N. Bottosso, T. Khuc, D. Brisbois, J. Khamis¹

A 12-year-old-boy was admitted to our Medical Imaging Department for scrotal/perineal hematoma and a painless partial erection after bicycle trauma. He had no other medical history. Doppler US and angiography of penile region were performed.

A gray-scale US (axial view, Fig. A) shows an irregular hypoechoic region within the echogenic cavernous tissue and cavernosal lacuna (arrows).

The color Doppler US (sagittal view, Fig. B) demonstrates extravasation of blood from the lacerated cavernosal artery (arrow), in an arterial-lacunar fistula with high systolic velocity and turbulent flow.

The pelvic angiogram (Fig. C) shows that the fistula (arrow) in the right corpus cavernosum is fed by a right pudendal artery.

Based on morphology and localization of the lesion on Doppler US and pelvic angiography, the diagnosis of posttraumatic arterial lacunar cavernous fistula was made.

The patient was treated by selective embolization of the right cavernous artery, without complication. A penile Doppler evaluation after 10 days was normal and demonstrated recanalization of the embolized artery.

Comment

Priapism is defined as involuntary, prolonged penile erection caused by factors other than sexual arousal.

Priapism affected 1, 5 / 100000 persons / year. It is a rare occurrence in children but can occur at any age, including newborns. It is classified as either low-flow or high-flow.

High-flow priapism is less common and results from unregulated arterial inflow to the corpora cavernosa usually due to an arterial-venous fistula. The most common etiology in children is perineal or penile trauma. This type of priapism frequently presents days to weeks after the traumatic event. It is usually not associated with penile ischemia: venous outflow is not compromised, tissue ischaemia does not occur and the condition remains painless.

Colour Doppler US is highly sensitive and the patterns in high-flow arterial priapism are markedly increased systolic velocity flow within the corpus cavernosum or cavernosal artery, development of an arterial-lacunar fistula (sensitivity 100%, specificity 73%). The gold standard for the diagnosis of AVF is digital subtraction angiography. Limitations of color Doppler US include underestimation of the number of accessory feeding vessels, which may become patent only after embolization of the main vascular supply and difficulty in recognizing vessels that feed the fistula from the opposite side. Treatment consists of superselective embolization of the torn artery with a success rate of about 90%. After embolization, penile Doppler US evaluation is recommended to assess recanalization of the embolized cavernosal artery (sensitivity 75%, specificity 100%).

Complications can be pain, erectile dysfunction, and corporeal fibrosis.

1. Department of Medical Imaging, CHC Liège, Liège, Belgium.